

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<i>Complete if Known</i>		
		<b>Application Number</b>	10/774,561	
		<b>Filing Date</b>	2004-02-09	
		<b>First Named Inventor</b>	PARK, Vincent	
		<b>Art Unit</b>	2617	
		<b>Examiner Name</b>	DANIEL JR, WILLIE J.	
<b>Sheet</b>	1	<b>of</b>	9	<b>Attorney Docket No:</b> 060568U3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2(f)</sup> (known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	001	US3542756	11-24-1970	GALLAGER ROBERT GRAY	
	002	US3665396	05-23-1972	FORNEY, Jr. George David	
	003	US4295218	10-13-1981	TANNER; Robert M.	
	004	US5157671	10-20-1992	KARPLUS; Kevin	
	005	US5271042	12-14-1993	BORTH; David F. et al.	
	006	US5293489	03-08-1994	FURUI; Toshiyuki et al.	
	007	US5313609	05-17-1994	BAYLOR; Sandra J. et al.	
	008	US5392299	02-21-1995	RHINES; Don S. et al.	
	009	US5396518	03-07-1995	HOW; Stephen K.	
	010	US5457704	10-10-1995	HOEHER; Peter et al.	
	011	US5526501	06-11-1996	SHAMS; Soheil	
	012	US5615298	03-25-1997	CHEN; Juin-Hwey	
	013	US5671221	09-23-1997	YANG; Jin	
	014	US5684835	11-04-1997	KROEGER; Brian W. et al.	
	015	US5742612	04-21-1998	GOURGUE; Frederic et al.	
	016	US5860085	01-12-1999	STORMON; Charles D. et al.	
	017	US5864703	01-26-1999	VAN HOOK; Timothy et al.	
	018	US5867538	02-02-1999	LIU; Qingli	
	019	US5892962	04-06-1999	CLOUTIER; Jocelyn	
	020	US5933650	08-03-1999	VAN HOOK; Timothy J. et al.	

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Application Number</b>	10/774,561
		<b>Filing Date</b>	2004-02-09
		<b>First Named Inventor</b>	PARK, Vincent
		<b>Art Unit</b>	2617
		<b>Examiner Name</b>	DANIEL JR, WILLIE J.
<b>Sheet</b>	<b>2</b>	<b>of</b>	<b>9</b>
		<b>Attorney Docket No:</b> 060568U3	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2(f)</sup> (known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	021	US5968198	10-19-1999	HASSAN; Amer A. et al.	
	022	US6002881	12-14-1999	YORK; Richard et al.	
	023	US6073250	06-06-2000	LUBY; Michael G. et al.	
	024	US6157815	12-05-2000	COLLINS; David Noel et al.	
	025	US6195777	02-27-2001	LUBY; et al.	
	026	US6205188	03-20-2001	STOTT; Jonathan Highton et al.	
	027	US6247158	06-12-2001	SMALLCOMB; Joseph	
	028	US6266758	07-24-2001	VAN HOOK; Timothy J. et al.	
	029	US6269124	07-31-2001	NAGAYASU; Takayuki et al.	
	030	US6292508	09-18-2001	HONG; Hilton K. et al.	
	031	US6298438	10-02-2001	THAYER; John S. et al.	
	032	US6339834	01-15-2002	CROZIER; Stewart N. et al.	
	033	US6397240	05-28-2002	FERNANDO; John Susantha et al.	
	034	US6438180	08-20-2002	KAVCIC; Aleksandar et al.	
	035	US6473010	10-29-2002	VITYAEV; Andrei et al.	
	036	US6484284	11-19-2002	SMALLCOMB; Joseph	
	037	US6490705	12-03-2002	BOYCE; Jill Macdonald	
	038	US6526538	02-25-2003	HEWITT; Eric	
	039	US6633856	10-14-2003	RICHARDSON; Tom et al.	

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. † Applicant's unique citation designation number (optional). ‡ See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. § Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ¶ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*\*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. †† Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<i>Complete if Known</i>		
		<b>Application Number</b>	10/774,561	
		<b>Filing Date</b>	2004-02-09	
		<b>First Named Inventor</b>	PARK, Vincent	
		<b>Art Unit</b>	2617	
		<b>Examiner Name</b>	DANIEL JR, WILLIE J.	
<b>Sheet</b>	<b>3</b>	<b>of</b>	<b>9</b>	<b>Attorney Docket No:</b> 060568U3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2(f)</sup> (known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	040	US6697441	02-24-2004	BOTTOMLEY; Gregory Edward et al.	
	041	US6718504	04-06-2004	COOMBS; Robert et al.	
	042	US6731700	05-04-2004	YAKHNICH; Evgeny et al.	
	043	US6754804	06-22-2004	HUDEPOHL; Lawrence Henry et al.	
	044	US6756872	06-29-2004	PENTHER; Bertrand	
	045	US6813219	11-02-2004	BLACKMON; Fletcher A.	
	046	US6895547	05-17-2005	ELEFThERIOU; et al.	
	047	US6925107	08-02-2005	HAGENAUER; Joachim et al.	
	048	US6934796	08-23-2005	PEREIRA; Jose P. et al.	
	049	US6961888	11-01-2005	JIN; Hui et al.	
	050	US6993070	01-31-2006	BERTHET; Antoine et al.	
	051	US7000177	02-14-2006	WU; Zining et al.	
	052	US7016440	03-21-2006	SINGER; Andrew C. et al.	
	053	US7027533	04-11-2006	ABE; Tetsushi et al.	
	054	US7065645	06-20-2006	TEICHER; Mordechai	
	055	US7072417	07-04-2006	BURD; Gregory et al.	
	056	US7095812	08-22-2006	CHAN; Albert et al.	
	057	US7099270	08-29-2006	YAMAGUCHI; Hirohisa	
	058	US7123663	10-17-2006	DE GAUDENZ; Ricardo et al.	

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<i>Complete if Known</i>		
		<b>Application Number</b>	10/774,561	
		<b>Filing Date</b>	2004-02-09	
		<b>First Named Inventor</b>	PARK, Vincent	
		<b>Art Unit</b>	2617	
		<b>Examiner Name</b>	DANIEL JR, WILLIE J.	
<b>Sheet</b>	<b>4</b>	<b>of</b>	<b>9</b>	<b>Attorney Docket No:</b> 060568U3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2(f)</sup> (known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	059	US7151830	12-19-2006	CARROLL; Dennis J.	
	060	US7154936	12-26-2006	BJERKE; Bjorn A. et al.	
	061	US7168033	01-23-2007	WU; et al.	
	062	US7170948	01-30-2007	BERTHET; Antoine et al.	
	063	US7173974	02-06-2007	SINDHUSHAYANA; Nagabhushana	
	064	US7173978	02-06-2007	ZHANG; et al.	
	065	US7178080	02-13-2007	HOCEVAR	
	066	US7203246	04-10-2007	YLITALO; Juha et al.	
	067	US7224758	05-29-2007	BANISTER; Brian C.	
	068	US7233782	06-19-2007	BAO; Feng et al.	
	069	US7247728	07-24-2007	LUITHLE; Joachim et al.	
	070	US7274728	09-25-2007	KUO; Wen-Yi	
	071	US7277509	10-02-2007	LILJESTROM; Henrik	
	072	US7292654	11-06-2007	SIMON; Marvin K. et al.	
	073	US7342981	03-11-2008	WONGWIRAWAT; Supat et al.	
	074	US7424002	09-09-2008	BARRATT; Craig H. et al.	
	075	US7675917	03-09-2010	JU; Mi-Suk et al.	
	076	US20020191593	12-19-2002	O'Neill; Alan et al.	
	077	US20040035828	02-26-2004	JIANCHANG; Ren	
	078	US20050053128	03-10-2005	SHEARER; Daniel D. III.	

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. †Applicant's unique citation designation number (optional). ‡  
 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. §Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ¶  
 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. †Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND  
 TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.  
 If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<i>Complete if Known</i>		
				<b>Application Number</b> 10/774,561		
				<b>Filing Date</b> 2004-02-09		
				<b>First Named Inventor</b> PARK, Vincent		
				<b>Art Unit</b> 2617		
				<b>Examiner Name</b> DANIEL JR, WILLIE J.		
<b>Sheet</b>	<b>5</b>	<b>of</b>	<b>9</b>	<b>Attorney Docket No:</b> 060568U3		

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>2</sup> Kind Code <sup>5</sup> (if known)				
	079	CA2266283A1	09-19-2000	TONG WEN [CA], et al.		<input type="checkbox"/>
	080	CN1081799A	02-09-1994	ERICSSON TELEFON AB L M [US]		<input checked="" type="checkbox"/>
	081	CN1270474	10-18-2000	HITACHI LTD [JP]		<input checked="" type="checkbox"/>
	082	CN1270484	08-16-2006	CHINESE MOBILE TELECOMM GROUP.		<input checked="" type="checkbox"/>
	083	EP1202591A2	05-02-2002	SAMSUNG ELECTRONICS CO LTD [KR]		<input type="checkbox"/>
	084	GB2354676A	03-28-2001	LUCENT TECHNOLOGIES INC [US]		<input checked="" type="checkbox"/>
	085	GB2361390	10-17-2001	TELEFONAKTIEBOLAGET L M ERICSSON.		<input checked="" type="checkbox"/>
	086	JP07030437	01-31-1995	NEC CORP.		<input checked="" type="checkbox"/>
	087	JP07203540	08-04-1995	N T T IDOU TSUSHINMOU KK.		<input checked="" type="checkbox"/>
	088	JP10022994	01-23-1998	HITACHI LTD.		<input checked="" type="checkbox"/>
	089	JP10023489A	01-23-1998	KOKUSAI ELECTRIC CO LTD.		<input checked="" type="checkbox"/>
	090	JP2002125069	04-26-2002	MITSUBISHI ELECTRIC CORP.		<input checked="" type="checkbox"/>
	091	JP2003188737	07-04-2003	SONY CORP.		<input checked="" type="checkbox"/>
	092	JP2003283457	10-03-2003	MATSUSHITA ELECTRIC IND CO LTD.		<input checked="" type="checkbox"/>
	093	RU2195783	12-27-2002	IPATEV VASILIJ		<input checked="" type="checkbox"/>

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>			<i>Complete if Known</i>		
			<b>Application Number</b>	10/774,561	
			<b>Filing Date</b>	2004-02-09	
			<b>First Named Inventor</b>	PARK, Vincent	
			<b>Art Unit</b>	2617	
			<b>Examiner Name</b>	DANIEL JR, WILLIE J.	
<b>Sheet</b>	6	of	9	<b>Attorney Docket No:</b> 060568U3	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> - Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
				MIKHAILOVICH., et al.	
	094	WO0035102A1	06-15-2000	SAMSUNG ELECTRONICS CO LTD [KR]	<input type="checkbox"/>
	095	WO0243424A1	05-30-2002	ERICSSON TELEFON AB L M [SE], et al.	<input type="checkbox"/>
	096	WO04079563	09-16-2004	FLARION TECHNOLOGIES INC.,US.	<input type="checkbox"/>
	097	WO93023964	11-25-1993	TELEFONAKTIEBOLAGET LM ERICSSON.	<input type="checkbox"/>
	098	WO9722217A1	06-19-1997	MOTOROLA INC [US], et al.	<input type="checkbox"/>
	099	WO9826620A2	06-18-1998	ERICSSON GE MOBILE INC [US]	<input type="checkbox"/>

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
	100	BERROU, A., et al., "Near Shannon limit error-correcting coding and decoding: Turbo codes", Proceedings 1993 IEEE International Conference on communications, Geneva, Switzerland, pgs. 1064-1070 (May 1, 1993).			
	101	BLAHUT R., "Theory and Practice of Error Control Codes," Addison-Wesley Publishing, May 1, 1984, pgs.47-49.			
	102	Digital cellular telecommunications system (Phase 2+); enhanced Multi-Level Precedence and Pre-emption service (eMLPP); (3GPP TS 03.67 version 7.2.0 Release 1998); ETSI TS 100 932 ETSI STANDARDS, LIS, SOPHIA ANTIPOLIS CEDEX, FRANCE, vol. 3-CN4;SMG3, no. V7.2.0, 1 December 2000 (2000-12-01), XP014005736.			
	103	HEMATI, Saied et al., "VLSI circuits: Iterative decoding in analog CMOS," Proceedings of			

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* Applicant's unique citation designation number (optional). 2  
 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. \* Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \*  
 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \* Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. \* Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		Complete if Known		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Application Number</b>	10/774,561	
		<b>Filing Date</b>	2004-02-09	
		<b>First Named Inventor</b>	PARK, Vincent	
		<b>Art Unit</b>	2617	
		<b>Examiner Name</b>	DANIEL JR, WILLIE J.	
<b>Sheet</b>	7	of	9	<b>Attorney Docket No:</b> 060568U3

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T2
		the 13th ACM Great Lakes Symposium on VLSI pgs 15-20, (April 1, 2003).		
	104	JIN et al., "Design of Low-Density Parity-Check Codes in Noncoherent Communication", International Symposium on Information Theory, (July 5, 2002).		<input type="checkbox"/>
	105	KONG et al., "Interleaved Cyclic Redundancy Check (CRC) Code", ACSSC pgs 2137-2141, Dept. of Electrical and Computer Engineering, IEEE (Jan. 1, 2003).		<input type="checkbox"/>
	106	LAMPE, L., H-J et al., "Iterative Decision-feedback Differential Demodulation of Bit-Interleaved coded MDPSK for Flat Rayleigh Fading Channels" IEEE Transactions on Communications, IEEE Vol. 49, No. 7, pgs 1176-1184, (July 1, 2001).		<input type="checkbox"/>
	107	MOBILITY AND SECURITY MANAGEMENT ED - MOULY M; PAUTET M-B" (1 January 1993), GSM SYSTEM FOR MOBILE COMMUNICATIONS, LASSAY-LES-CHATEAUX, EUROPE MEDIA, FR, PAGE(S) 432 - 498, XP000860007, page 465, line 16 - page 471, line 13.		<input type="checkbox"/>
	108	Mohammad M. Mansour, Neres R. Shanbhag, Session 11: Low-power VLSI decoder architectures for LDPC codes, Proceedings of the 2002 international symposium on Low power electronics and design (August 12, 2002), pgs. 284-289.		<input type="checkbox"/>
	109	NN77112415. "Digital Encoding of Wide Range Dynamic Analog Signals", IBM Techn. Disclosure Bulletin, Vol. No. 20, Issue No. 6, pgs. 2415-2417, (11/1/1997).		<input type="checkbox"/>
	110	NN9210335. "Hierarchical Coded Modulation of Data with Fast Decaying Probability Distributions", IBM Tech. Disclosure Bulletin, (October 1, 1992), Vol. No. 35; Issue No. 5; Pages 335-336, whole document.		<input type="checkbox"/>
	111	Paranchych et al. "Performance of a Digital Symbol Synchronizer in Co-channel Interference and Noise", IEEE Transactions on Communications, pages: 1945-1954; Vol. 48, No. 11, (Nov. 1, 2000), whole document.		<input type="checkbox"/>
	112	PELEG M., et al., "Iterative decoding for coded noncoherent MPSK communications over phase-noisy AWGN channel" IEE Proceedings: Communication, Institution of Electrical Engineers, GB, Vol. 147, No 2, pgs 87-95 (4/14/2000).		<input type="checkbox"/>
	113	PERKINS C ET AL: "IP Mobility Support; rfc2002.txt" IETF STANDARD, INTERNET ENGINEERING TASK FORCE, IETF, CH, (1 October 1996), XP015007786 ISSN: 0000-0003.		<input type="checkbox"/>
	114	PETERSON et al., "Error-Correcting Codes", Second Edition, The Massachusetts Institute of Technology Press, (January 1, 1972), pgs.212-213, 261-263, 362.		<input type="checkbox"/>

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Include if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Initial copy of this form with next communication to applicant. \* Applicant's unique citation designation number (optional). 2  
 See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. \*Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \* For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. \*Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.  
 If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<i>Complete if Known</i>		
		Application Number	10/774,561	
		Filing Date	2004-02-09	
		First Named Inventor	PARK, Vincent	
		Art Unit	2617	
		Examiner Name	DANIEL JR, WILLIE J.	
Sheet	8	of	9	Attorney Docket No: 060568U3

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T2
	115	PROAKIS, John G., "Digital Communications" McGrawHill, pgs 272-273 XP002370408 (January 1, 2001).		<input type="checkbox"/>
	116	RAPHAELI, D., et al., "Combined Turbo Equalization and Turbo Decoding", IEEE Communications Letters, Vol. 2., No. 4, pgs 107-109 (4/4/1998).		<input type="checkbox"/>
	117	Ratynskiy M.B. "Basis of cellular communication", Moscow, Radio i Svyaz, (January 2000), pages 20-68.		<input type="checkbox"/>
	118	Richardson et al. "The capacity of Low-density Parity-Check Codes Under Message-passing Decoding", IEEE Transactions on Information Theory; pages: 599-618, Vol. 47, No. 2, (February 2001) (same inventor) whole document.		<input type="checkbox"/>
	119	SOROKINE, V. et al., "Innovative Coding Scheme for Spread-spectrum Communications," THE NINTH IEEE International Symposium on Indoor and Mobile Radio Communications, Vol.3, (September 1,1998), pgs.1491-1495.		<input type="checkbox"/>
	120	Supplementary European Search Report - EP04758784 - Search Authority - The Hague - 2011-04-01 (060574U1EP).		<input type="checkbox"/>
	121	T. Moors and M. Veeraraghavan, "Preliminary specification and explanation of Zing: An end-to-end protocol for transporting bulk data over optical circuits", pgs. 1-55 (May 15, 2001).		<input type="checkbox"/>
	122	T. Richardson, A. Shokrollahi, R. Urbanke, "Design of Capacity-Approaching Irregular Low-Density Parity-Check Codes", pgs. 1-43 (March 2001).		<input type="checkbox"/>
	123	T. RICHARDSON and R. URBANKE, "An Introduction to the Analysis of Iterative Coding Systems," 2001, pgs.1-36.		<input type="checkbox"/>
	124	T. Richardson and R. Urbanke, "The Capacity of Low-Density Parity-Check Codes under Message-Passing Decoding", pgs. 1-44 (March 9, 2001).		<input type="checkbox"/>
	125	Translation of Office Action in Japan Application 2006-503424 corresponding to US application 10/774,561, citing JP10023489 dated 2010-10-12 (060568).		<input type="checkbox"/>
	126	YAN, MING, "Channel Estimation," Internet Article, <http://dsp.ucsd.edu/yanming/> retrieved 03/01/2006.		<input type="checkbox"/>

EXAMINER SIGNATURE

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* Applicant's unique citation designation number (optional). 2  
 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. \*Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \*  
 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. \*Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND  
 TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.